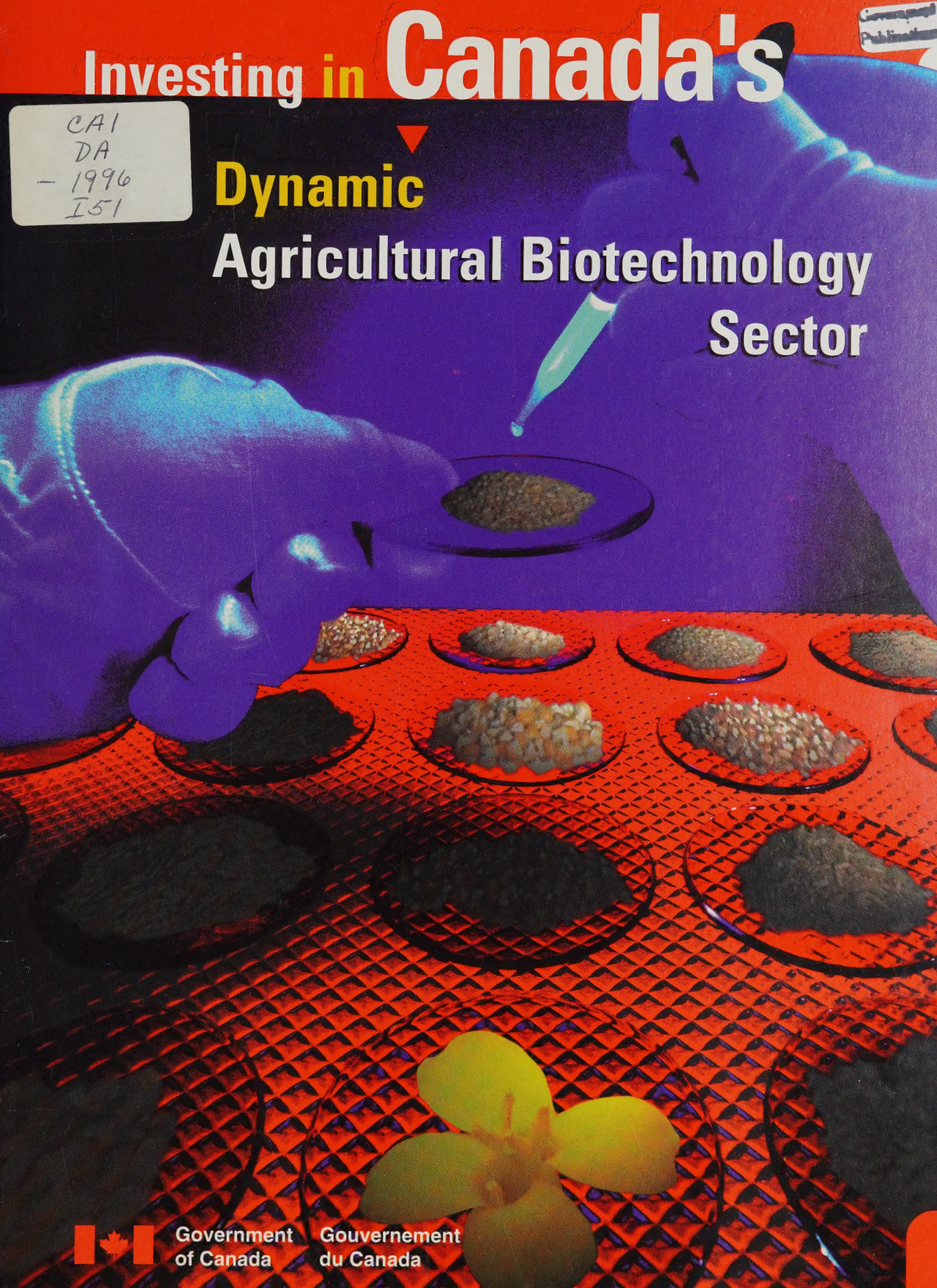


Investing in Canada's

CAI
DA
- 1996
I51

Dynamic

Agricultural Biotechnology Sector



Government
of Canada

Gouvernement
du Canada



To obtain additional copies:

Market and Industry Services Branch
International Markets Bureau
Programs and Multilateral Affairs Division
10th floor
Sir John Carling Building
930 Carling Avenue
Ottawa, Ontario K1A 0C5

Telephone: (613) 759-7744
Facsimile: (613) 759-7499
E-mail: stewartja@em.agr.ca

© Minister of Public Works and Government Services Canada 1998

Catalogue No. A72-56/1998E
ISBN 0-662-26897-0

Aussi disponible en français.

4311 1303

Canadian AG-Biotech

The World is Investing in Canadian AG-Biotech

The world knows Canada is a leader in agricultural production. That leadership is gaining strength through cutting-edge agricultural biotechnology research, development and commercialization.

Canada has a diverse agri-food sector that is quickly making the most of biotechnology advances. Thousands of field trials of ag-biotech products are already in process - more than in the entire European Union. Already, more than 30 products have been approved by the federal government.

Join international firms in the food, chemical, and seed industries who know that Canada offers an attractive research and investment climate for ag-biotech.

International companies investing in Canada's ag-biotech sector will find:

- a staff of approximately 30,000, including 10,000 specializing in ag-biotech;
- a predictable and effective regulatory environment;
- successful partnerships with universities, industry and governments;
- a low cost operating environment;
- comprehensive financial incentives; *and*
- access to a NAFTA market worth 8.5 trillion dollars (U.S.) in GDP.

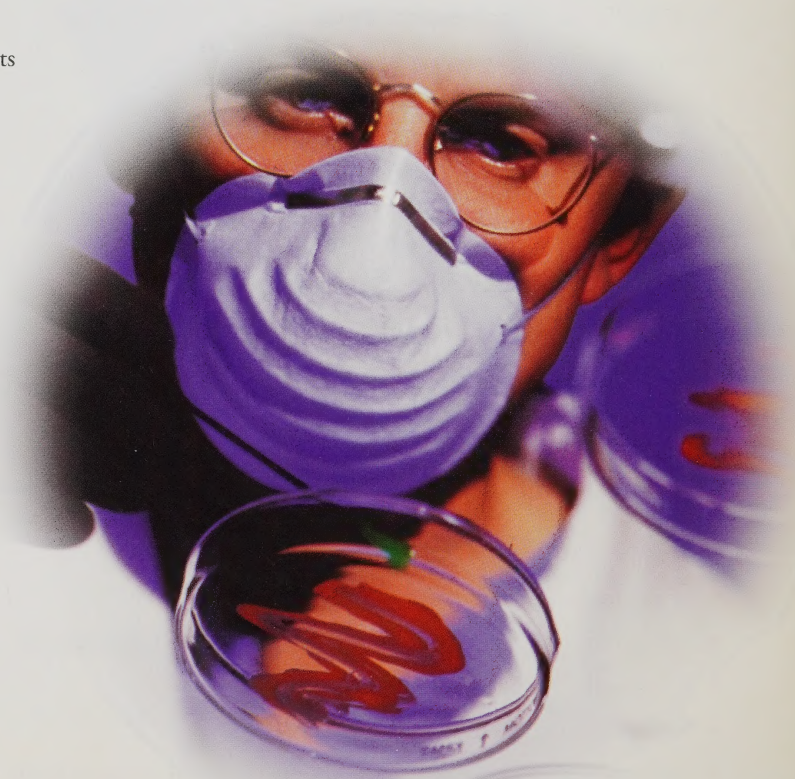


World Class Scientists

Canada is number one in the world when it comes to developing knowledge workers, according to the World Economic Forum's 1997 Global Competitiveness Report.

One reason is that Canada leads the world in post-secondary enrollment. Two-thirds of Canadians between the ages of 20-24 are enrolled in Canada's internationally respected system of universities, colleges and other post-secondary institutions.

The agriculture sector benefits from more than 10,000 new post-secondary graduates in agricultural and biological sciences each year.



A Predictable and Effective Regulatory Environment

Canada's regulatory system is the underpinning of its safe, wholesome food supply.

The Canadian Food Inspection Agency is the lead agency responsible for the regulation of agricultural products, including those developed through the application of biotechnology. Through the Federal Framework for the Regulation of Biotechnology Products, the Agency and Health Canada work together to provide a predictable and scientifically-sound approach to regulation that is in harmony with national priorities and international standards.

The end result:

*Safe, high quality
agricultural products
being successfully traded
in the international marketplace.*



Canada's Agricultural Biotechnology

British Columbia

At the core of British Columbia's highly regarded agricultural biotechnology community are research establishments including Agriculture and Agri-Food Canada's Pacific Research Centre, the University of British Columbia's Department of Food Science, and industry entrepreneurs such as Canadian Inovatech and Forbes Meditech. The British Columbia Biotechnology Alliance connects investors to the key players in British Columbia's technology industry and to opportunities in sectors including agriculture and food and beverages.

Alberta

Ag-biotech is a significant contributor to Alberta's dynamic primary and value-added food industry. Twenty-five ag-biotech companies already operate in Alberta, drawing on a strong network of biotechnology research and services in the private sector, universities and government agencies. Plant, animal and food biotechnology, and molecular farming are some major areas of concentration. The Ministry of Agriculture, Food and Rural Development has a strong commitment to initiatives in research and development, technology transfer and commercialization of ag-biotech products. Alberta Agricultural Research Institute is Alberta's leading agency for coordinating and funding biotechnology research.

Saskatchewan

Home to 40% of Canada's agricultural biotechnology industry and one of the top agricultural research centres in the world. Companies from Europe and the United States have joined forces with Canadian firms as investors in one of North America's fastest-growing high-technology clusters. Innovation Place is one of the most successful research and development parks in North America. It is widely recognized as a leading centre for Canada's ag-biotech industry and world recognized for oilseed research.

Manitoba

An excellent network of public and private research facilities support agricultural biotechnology activities in this province. Public agencies including Agriculture and Agri-Food Canada's research centres at Brandon, Winnipeg and Morden, its Foreign Animal Disease Unit, and University of Manitoba's Faculties of Agriculture and Food Sciences, and Human Ecology work closely with industry partners to strengthen the ag-biotech commercial and research and development base. Agriculture and Agri-Food Canada's Cereal Centre in Winnipeg is leading the development of improved cereal varieties through biotechnology.

Ontario

The diverse agri-food sector in Ontario provides world class business opportunities for commercializing technology in agriculture, food and non-food applications. Key players are five Ontario universities, the Guelph Food Technology Centre, Ontario Agri-Food Technologies, and the Ontario Ministry of Agriculture, Food and Rural Affairs. Superior laboratory facilities including the internationally known Laboratory Services Division of the University of Guelph, 10 public and private agri-food research institutes and over 500 scientists support investment and economic growth in this sector. Ontario's agri-food value chain accounts for 36% of the businesses in this sector in Canada.

Canada has

well-established

ag-biotech clusters/

communities across the country

Clusters & Communities

Quebec

Biotechnology is a rapidly growing sector for both Quebec research establishments and companies. The most widely used biotech applications are in health, natural resources, environment and bio-food industries. Bio-food R&D is mostly in crop and animal production and includes development of transmutated products, control of diseases and improvement of preventive and curative treatments. Processing industry biotech applications aim at improving fermentation treatments, the production of food additives or the production of flavouring extracts, gelling agents and artificial sweeteners. The environment sector uses biotechnologies particularly to address pollution of soil and aquatic environments and the treatment of agricultural waters and waste. The Quebec agricultural biotechnology community includes universities and research centres such as the University of Montreal, Laval University, the Food Innovation Technology Center (Cintech AA), Agriculture and Agri-Food Canada's Centre for Food Research and Development, as well as Bioagral and Bioagro Contact which are organizations that coordinate ag-biotech activities.

New Brunswick

BioAtlantech is the lead biotech development organization in New Brunswick and is a single entry point to biotechnology stakeholders and supporters in the province. BioAtlantech works closely with provincial and federal economic development agencies, the Research & Productivity Council, the Agriculture and Agri-Food Canada Potato Research Centre, the N.B. Plant Propagation Centre,

Huntsman Marine Centre, St. Andrews' Biological Station, Atlantic Forestry Centre, N.B. universities and industry leaders in the agriculture and food, aquaculture and forestry sectors. Building on the province's track record in potato variety development and food processing, BioAtlantech is spearheading various initiatives to strengthen its biotech commercial and research and development base in molecular potato breeding, novel food development, industrial use of plants and nutraceuticals.

Nova Scotia

The Nova Scotia Agricultural College is building links between agricultural biotechnology and developments in medicine and environmental science. It has long been a centre for agricultural research and its capabilities. The College has established the Atlantic Agri-Tech Park, a new incubator facility managed by InnovaCorp, to foster further industrial applications of agricultural biotech research.

Prince Edward Island

The biotech research and industry community within Prince Edward Island is focused around the scientific expertise of organizations that co-operate through the Belvedere Avenue Association. These organizations include the Agriculture and Agri-Food Canada Centre for Animal and Plant Health, the University of Prince Edward Island, the Atlantic Veterinary College, the PEI Food Technology Centre and the Federal/Provincial Charlottetown Research Station. Their mandates include: animal health and diagnostics, fish health and diagnostics, pharmacogenetics, food product development, food safety, plant health and safety and retroviruses. The recently established AVC Inc. plays a key role in the development of commercial partnerships in the commercialization of biotechnology and life science technologies.

Newfoundland

Newfoundland has more than 50 organizations involved with the biotechnology sector, including marine, agriculture, health, nutraceuticals, and bioinformatics. Seabright Corp. Ltd., the technology commercialization centre for Memorial University of Newfoundland, is instrumental in the growth of this sector. Seabright and the Newfoundland Biotechnology Working Group works closely with the Department of Industry, Trade and Technology, Industry Canada, Marine Institute, Memorial University of Newfoundland, Ocean Sciences Centre, Botanical Gardens, and the Department of Forest Resources and Agri-foods. In addition, Seabright manages the Genesis Centre, an incubator facility for start-up companies with high export growth.

A Cost-Competitive Edge

Canada has the lowest business start-up and operational costs among leading European and North American economies. Up to 5.4% better than the United States.

Of course, not all industries are the same. According to the independent 1997 study — *The Competitive Alternative:*

A Comparison of Business Costs in Canada, the United States and Europe, Canada's strongest cost advantages are actually in research and development-intensive industries like agricultural biotechnology.

Generous Research & Development Tax Credits

Canada offers the best R&D tax credits among leading industrialized countries.

Large companies can qualify for a federal tax credit of 20% on eligible R&D spending. That credit can be enough to eliminate federal income tax for some companies. It cuts taxes significantly for many others.

Small Canadian-controlled companies can qualify for a federal tax credit of 35% on their first \$2 million in R&D. That tax credit is also fully refundable.



Direct Financial Support

Investors *look* for the highest returns and the shortest payback periods on their ag-biotech research investments. On top of its other benefits, Canada's federal and provincial governments offer programs that support those investors.

One example is Agriculture and Agri-Food Canada's Matching Investment Initiative.

This focuses on collaborative research projects and allows Agriculture and Agri-Food Canada to match Canadian industry R&D contributions up to 'one-for-one.' Canadian industries are using this money to stretch their research dollars. They are getting new ag-biotech solutions out to global markets faster.

A. Lassonde, Inc. of Quebec

- Developing natural alternatives to chemical food colorants.

Quaker Oats Company

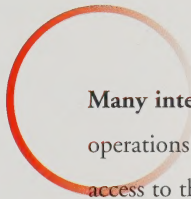
- Helping breeders turn out higher yielding and better quality oats by mapping genetic linkages.



Canada Offers Access to the World

Canada is attracting international investment in all areas of its economy. One reason is Canada's world-respected infrastructure for business:

- the lowest Internet access charges of all G-7 countries;
- a modern telecommunications network with low cost access; *and*
- excellent transportation infrastructure for air, road and rail services.



Many international companies are locating operations in Canada because it offers secure access to the richest market in the world - North America. Canada boasts an international reputation as a leader in the export of agricultural products worldwide.

By the year 2000, Canada will be the gateway to more than 400 million North Americans. Those consumers are expected to spark food and beverage sales volumes of over \$900 billion dollars. Canadian-made food products are already a retail feature throughout the United States.



For further information

Agriculture and Agri-Food Canada's website address is:

<http://www.agr.ca>

For further information on the regulation of agricultural products of biotechnology and links to other sites dealing with biotechnology, please see the Canadian Food Inspection Agency's website at:

<http://www.cfia-acia.agr.ca/english/food/biotech/bsco.html>

For advice and information on investment opportunities in Canada's agricultural biotechnology sector, contact your local Canadian Embassy, High Commission or Consulate.

*All canola shots
are courtesy of the*

▼ Canola Council of Canada

Canada